

CALIFORNIA ENERGY COMMISSION

**DOCKET**

**08-IEP-1F**

DATE OCT 02 2008

RECD. OCT 02 2008

In the Matter of:

Preparation of the AB 1632 Nuclear  
Power Plant Assessment Report,  
2008 Integrated Energy Policy Report  
Update, and the 2009 Integrated Energy Policy  
Report

Docket No. 07-AB-1632  
Docket No. 08-IEP-1F

**COMMENTS OF THE CALIFORNIA  
INDEPENDENT SYSTEM OPERATOR ON  
CONSULTANT'S DRAFT REPORT ENTITLED *AB 1632  
ASSESSMENT OF CALIFORNIA'S OPERATING NUCLEAR  
PLANTS***

Pursuant to the Notice of Joint Committee Workshop and Report Availability in the above-referenced dockets, the California Independent System Operator Corporation ("CAISO") submits the following comments to the California Energy Commission ("CEC") regarding the Draft Consultant's Report: *AB 1632 Assessment of California's Operating Nuclear Plants* (hereinafter "Draft Report").

**A. Introduction**

On September 25, 2008, the CEC held a public workshop to present the Draft Report prepared in response to the Assembly Bill 1632<sup>1</sup>, which requires the CEC to among other things evaluate the potential impacts of electricity infrastructure, supply and demand resulting from a major disruption at Diablo Canyon Power Plant ("Diablo Canyon") and/or the San Onofre Nuclear Generating Station ("SONGS"). The CAISO provided a brief presentation at that workshop. A copy of that presentation is attached

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<sup>1</sup> *Codified at California Public Resources Code § 25303.*

hereto as Exhibit A. These comments seek to clarify statements made in the Draft Report and the potential risk to electricity load resulting from an extended or permanent outage at either Diablo Canyon or SONGS.

**B. The Draft Report misstates information presented in the CAISO’s 2008 Summer Loads and Resources Operations Preparedness Assessment.**

The Draft Report makes a number of references to and draws a number of conclusions based upon the CAISO 2008 Summer Loads and Resources Operations Preparedness Assessment (“CAISO Summer Assessment”). However, the Draft Report misstates information presented in the CAISO Summer Assessment. The following are some specific instances:

1. *“The CAISO publication entitled “2008 Summer Loads and Resources Operations Preparedness Assessment” provides a detailed discussion of electricity transmission issues and replacement power supply plans.”*<sup>2</sup>

The CAISO Summer Assessment did not provide a detailed discussion of transmission or replacement power issues. Rather, the 2008 Summer Assessment provides an overview of available electricity supply and demand for the summer of 2008 in order to help the CAISO and the electricity industry prepare for contingencies that could arise during that timeframe.

2. *“Table 6 shows that under normal conditions and given current loads and resources, there is a 23.9 percent planning reserve margin, which is well above the CPUC’s required resource adequacy margin of 15 percent to 17 percent.”*<sup>3</sup>

The CAISO Summer Assessment presents results of a probabilistic analysis of operating reserve margins. Table 6 from the Summer Assessment reflects a “planning perspective” based on various planning assumptions, not normal conditions. Some of the conditions in Table 6, particularly Net Interchange levels, do not reflect normal conditions. Moreover, the 19.9% - 23.9% planning reserve margins represented in Table 6 were projections for the summer of 2008—now an historical timeframe. These projections are now outdated and should not be used to reach conclusions about potential future events.

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<sup>2</sup> Draft Report at p. 202.

<sup>3</sup> *Id.* at p. 202.

3. *“If actual imports at the time of plant outages were lower than the assumed amount, the loss of generating capacity at Diablo Canyon and SONGS would have a proportionately greater impact on operating reserve margins.”*<sup>4</sup>

In the CAISO system, actual imports are frequently lower than the assumed amount in the planning reserve calculation, particularly at time of system peak.

4. *“... [T]he CAISO did not address [in the Summer Assessment] contingencies that occur in real-time, such as a loss of a significant amount of generation and/or transmission and limited ability to rely on imports from other control areas.”*<sup>5</sup>

This statement is incorrect. The primary purpose of the 2008 Summer Assessment was to address real-time generation outage and transmission curtailment contingencies and various levels of imports in order to help the CAISO and the electricity industry prepare for contingencies that could arise during real-time conditions.

**C. The Draft Report fails to acknowledge that an extended or permanent outage at either Diablo Canyon or SONGS would greatly increase the probability of the need to shed firm load on the CAISO system during peak demand conditions.**

Diablo Canyon and SONGS each represent approximately 10 percent of the generation in their respective congestion zones (NP26 and SP26) and together 10 percent of the CAISO’s system resources. The only appropriate conclusion that can be drawn from the CAISO Summer Assessment is that the probabilities for shedding firm load would dramatically increase in the event either Diablo Canyon or SONGS were unexpectedly shut down for an extended period that spanned the summer months. While the CAISO Summer Assessment does not address future peak demand periods beyond 2008, there are reports available that do. The Western Electricity Coordinating Council (“WECC”) draft 2008 Power Supply Assessment (“PSA”) assesses all known new generation projects throughout the Western Interconnect and classifies the progress of each project in achieving commercial operation.<sup>6</sup> The 2008 WECC draft PSA uses these

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<sup>4</sup> *Id.* at p. 203.

<sup>5</sup> *Id.* at p. 203.

<sup>6</sup> WECC draft 2008 PSA <http://www.wecc.biz/index.php?module=pnForum&func=viewtopic&topic=877>

various classifications of new generation projects to develop ten-year projections of the capability for meeting planning reserve margins in WECC subregional zones, including the Northern California zone and the Southern California and Mexico zone.<sup>7</sup> Considering the results of the 2008 PSA, the conclusion that the probabilities for shedding firm load would dramatically increase from the extended loss of either Diablo Canyon or SONGS holds true both in the near term and in any realistic generation expansion scenario for the future.

The Draft Report concludes that sufficient generation exists to serve load in the event of an extended outage between today and 2012 at Diablo Canyon or SONGS, or both,<sup>8</sup> and that a prolonged shutdown of Diablo Canyon would not pose reliability concerns.<sup>9</sup> These statements contradict both the CAISO Summer Assessment and the WECC 2008 PSA. The Draft Report also states “The CAISO has also found that there are sufficient reserve margins to accommodate the loss of either or both nuclear plants.” The CAISO did conclude in its February 29, 2008 report entitled *Old Thermal Generation Phase 1 Report (2008-2012 Study Results)* that under one generation expansion scenario, an amount of generation could be retired that is somewhat greater than the amount of generation reflected by the nuclear units.<sup>10</sup> However, as stated in the CAISO’s February 28, 2008 report, this contingency could result in a four-fold increase in the chances of having to shed firm load, which is consistent with the comments above related to the CAISO Summer Assessment and the WECC 2008 draft PSA.<sup>11</sup>

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<sup>7</sup> WECC draft PSA at pp. 45-48.

<sup>8</sup> Draft Report at p. 212.

<sup>9</sup> *Id.* at p. 196.

<sup>10</sup> CAISO February 28, 2008 Old Thermal Generation Phase 1 Report (2008-2012 Study Results) <http://www.caiso.com/1f80/1f80a4a5568f0.pdf>

<sup>11</sup> CAISO February 28, 2008 Old Thermal Generation Phase 1 Report (2008-2012 Study Results) at p. 1.

**D. Conclusion**

The CAISO appreciates the opportunity to provide input to the CEC on the Draft Report. For the reasons stated herein, the CEC should modify the Draft Report in accordance with these comments.

Dated: October 2, 2008

Respectfully submitted,  
California Independent System Operator

By



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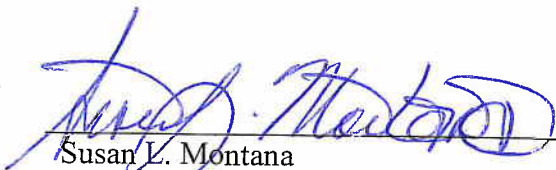
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## CERTIFICATE OF SERVICE

I hereby certify that on October 2, 2008, I served, by electronic and U.S. mail, a copy of the foregoing Comments of the California Independent System Operator on Consultant's Draft Report Entitled AB 1632 Assessment of California's Operating Nuclear Plants to the California Energy Commission's Dockets Unit.

Executed on October 2, 2008 at Folsom,  
California

  
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Susan L. Montana  
An employee of the California Independent  
System Operator

# **EXHIBIT A**



# CAISO Comments on: AB 1632 Assessment of California's Operating Nuclear Plants - Draft Report

Bob Emmert - CAISO  
Sr. Loads & Resources Engineer

CEC Joint Committee Workshop on the AB 1632  
Nuclear Power Plant Assessment  
September 25, 2008



# Report's Misunderstanding of the CAISO 2008 Summer Loads & Resources Operations Preparedness Assessment

- *“The CAISO publication entitled “2008 Summer Loads and Resources Operations Preparedness Assessment” provides a detailed discussion of electricity transmission issues and replacement power supply plans.”* (p. 202)
  - The CAISO 2008 Summer Loads and Resources Operations Preparedness Assessment (2008 Summer Assessment) did not address transmission or replacement power issues in any detail.

# Report's Misunderstanding of the CAISO 2008 Summer Loads & Resources Operations Preparedness Assessment

- “Table 6 shows that under normal conditions and given current loads and resources, there is a 23.9 percent planning reserve margin, which is well above the CPUC’s required resource adequacy margin of 15 percent to 17 percent. (p. 202)

<b>Summer 2008 Outlook - CEC Assumed Imports</b>			
<b>Resource Adequacy Planning Conventions</b>	<b>CAISO</b>	<b>SP26</b>	<b>NP26</b>
Existing Generation	47,716	22,376	25,349
Retirements (Known)	-122	-122	0
High Probability CA Additions	489	442	47
<b>Net Interchange</b>	10,350	10,100	250
Total Net Supply (MW)	58,432	32,796	25,646
Demand (1-in-2 Summer Temperature)	48,900	28,331	21,969
DR & Interruptible Programs (80% of CPUC 2008 estimates)	2,130	1,427	703
<b>Planning Reserve<sup>1</sup></b>	<b>23.9%</b>	<b>20.8%</b>	<b>19.9%</b>

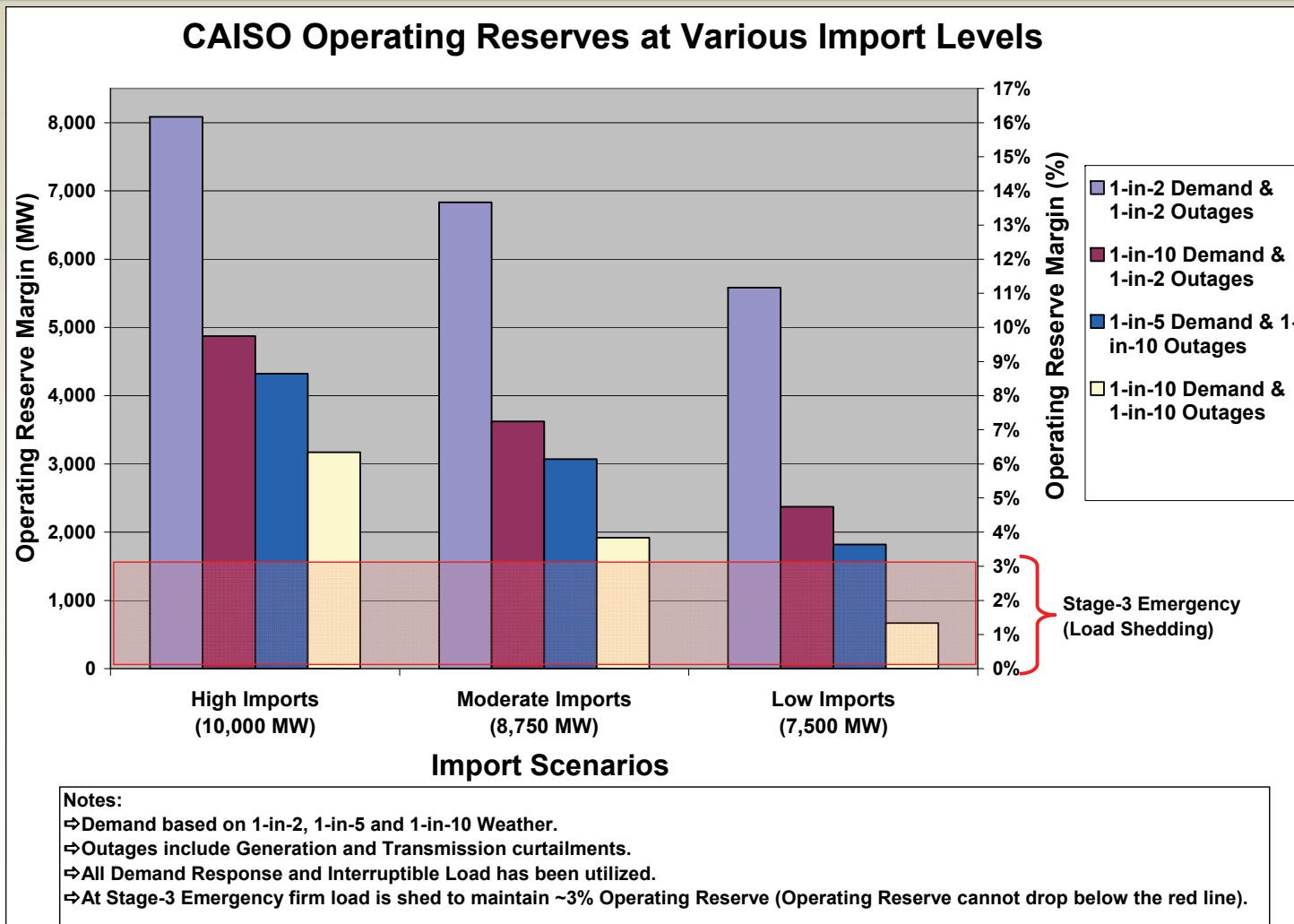
<sup>1</sup> Planning Reserve calculation (Total Net Supply + Demand Response + Interruptibles)/1-in-2 Demand)-1.

- Table 6 is based on a “planning perspective” based on various planning assumptions, not normal conditions.
- The 19.9% - 23.9% planning reserve margins represented were projections of what is now a historical timeframe and it is not appropriate to use these planning reserve margins to make conclusions about potential future events.

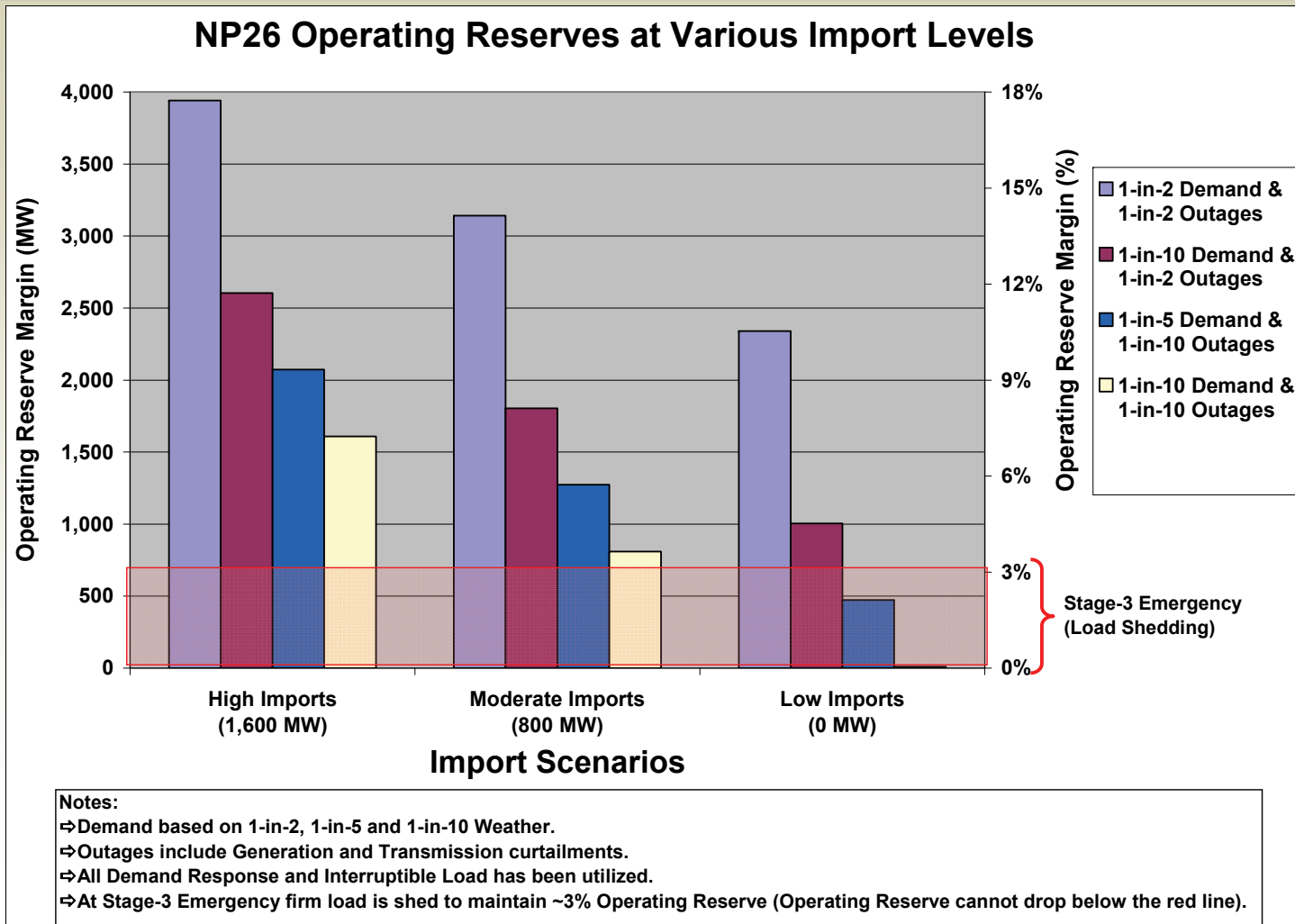
# Report's Misunderstanding of the CAISO 2008 Summer Loads & Resources Operations Preparedness Assessment

- *“If actual imports at the time of plant outages were lower than the assumed amount, the loss of generating capacity at Diablo Canyon and SONGS would have a proportionately greater impact on operating reserve margins.”* (p. 202)
  - Actual imports are frequently lower than the assumed amount in the planning reserve calculation, particularly at time of peak.
- *“. . . the CAISO did not address contingencies that occur in real-time, such as a loss of a significant amount of generation and/or transmission and limited ability to rely on imports from other control areas.”* (p. 202)
  - The primary purpose of the 2008 Summer Assessment was to address real-time generation outage and transmission curtailment contingencies.
  - The 2008 Summer Assessment also looked at probable ranges for demand and import levels.

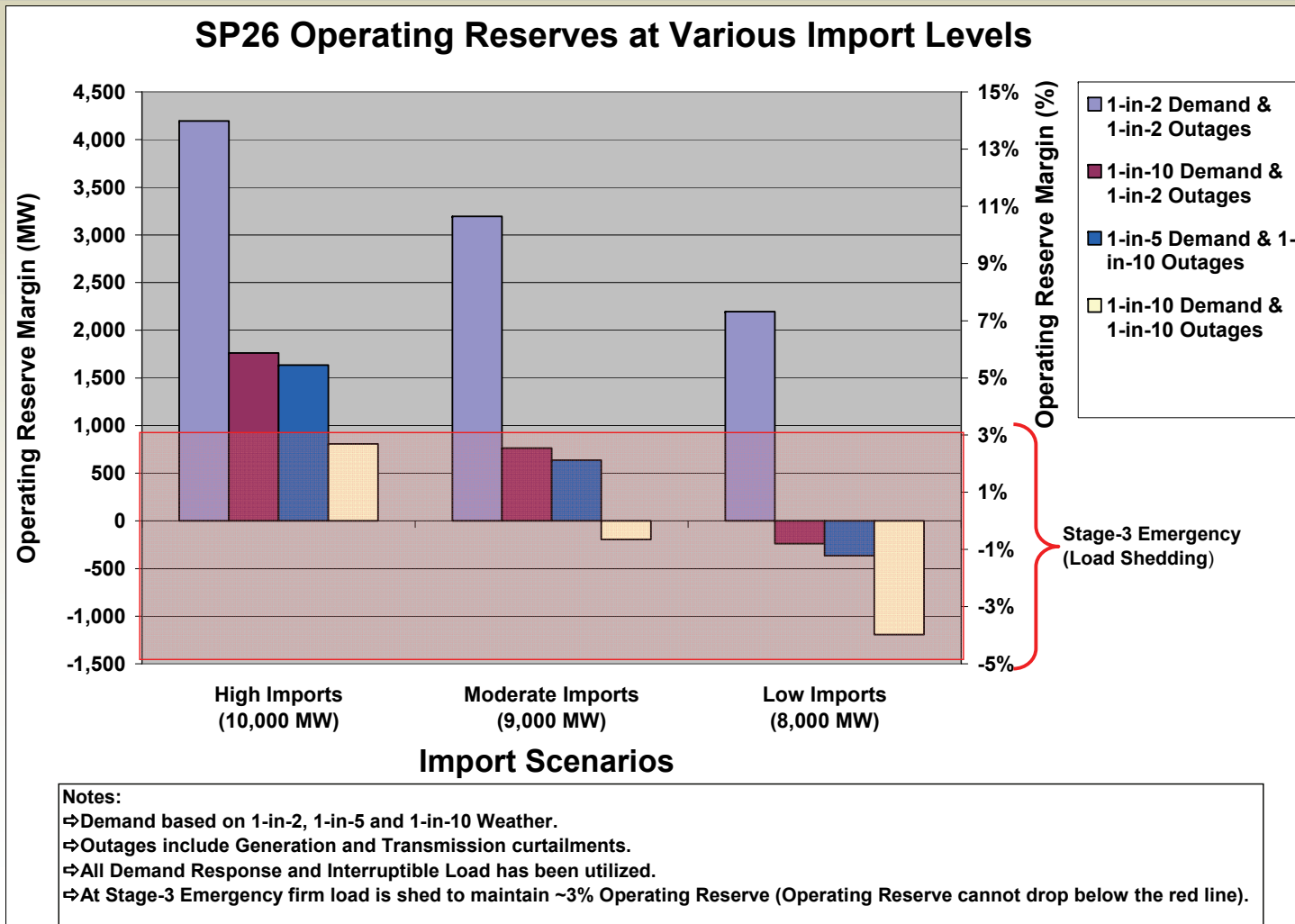
# CAISO 2008 Summer Assessment Real-time Contingency Deterministic Results



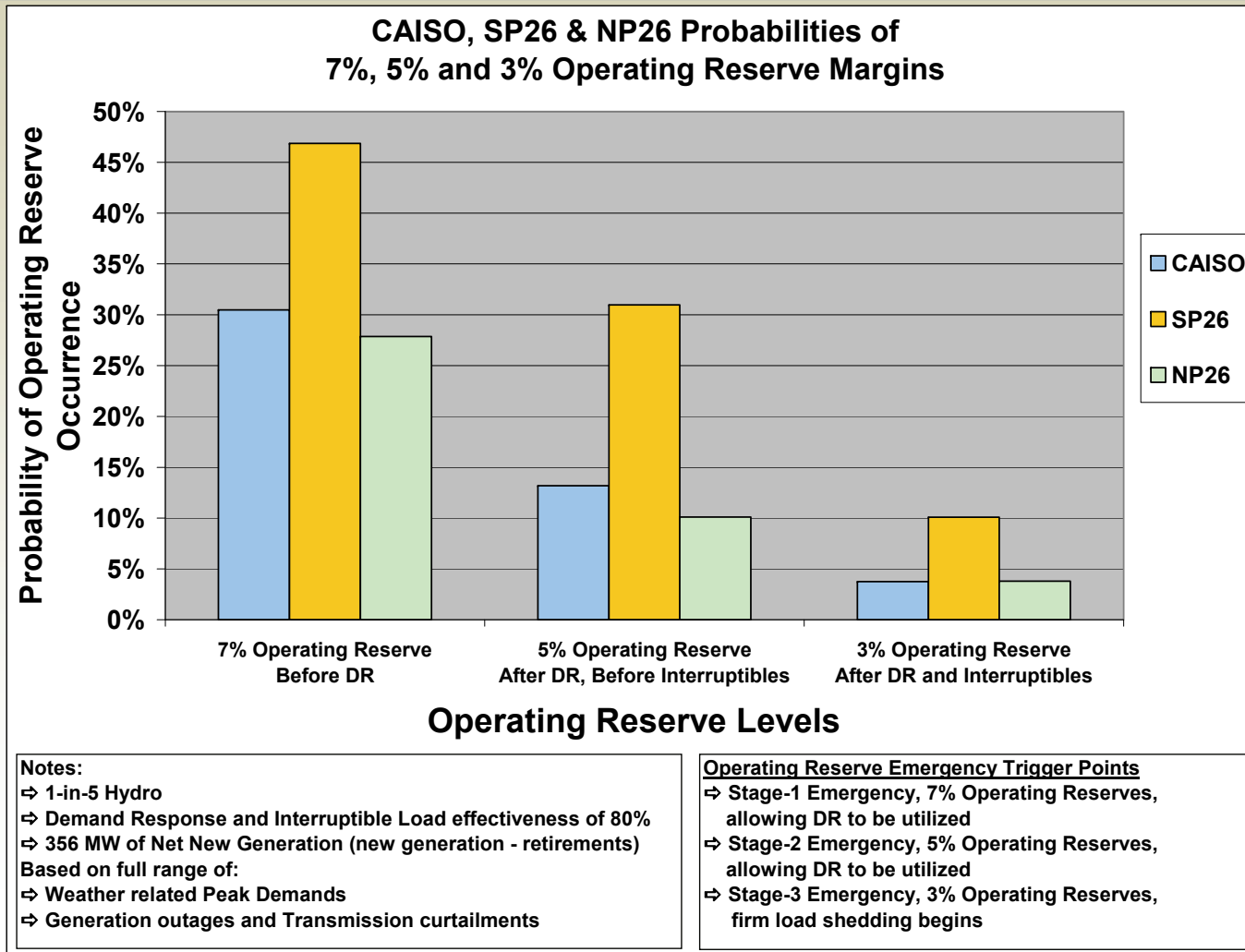
# CAISO 2008 Summer Assessment Real-time Contingency Deterministic Results



# CAISO 2008 Summer Assessment Real-time Contingency Deterministic Results



# CAISO 2008 Summer Assessment Real-time Contingency Probabilistic Results



# Conclusions Drawn from the 2008 Summer Assessment

- If either Diablo Canyon or SONGS were unexpectedly shut down for an extended period during the summer the probabilities for shedding firm load would greatly increase, both in the near term and in any realistic generation expansion scenario for the future.



# To Access the CAISO 2008 Summer Assessment

<http://www.caiso.com/docs/2003/04/25/200304251132276595.html>

## Questions